U.S. Army-Baylor University Graduate Program

in Health Care Administration

Patient Satisfaction with Obstetrics Care

at Walter Reed Army Medical Center

A Graduate Management Project

Submitted to the Faculty of Baylor University

In Partial Fulfillment of the

Requirements for the Degree of

Master's of Health Care Administration

By

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This study focused on determining which factors in nursing services influence patient satisfaction on the obstetrics ward of WRAMC. I developed a survey instrument to evaluated patient satisfaction. I looked specifically at the dimensions of teaching, communication, physical care, interaction between patients and nursing staff, interacton within the family, ancillary services, and overall satisfaction. I also analyzed the influence of various demographic and clinical variables.

After testing the survey, I administered it, and then analyzed the data using descriptive, univariate, and multivariate statistics. The most significant finding is that patient's satisfaction with teaching may be the most important predictor of patient's overall level of satisfaction. Overall, the study indicated that patients are satisfied with the obstetrical services they receive at WRAMC.

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Abstract

This study focused on determining which factors in nursing services influence patient satisfaction on the obstetrics ward of WRAMC. I developed a survey instrument to evaluate patient satisfaction. I looked specifically at the dimensions of teaching, communication, physical care, interaction between patients and nursing staff, interaction within the family, ancillary services, and overall satisfaction. I also analyzed the influence of various demographic and clinical variables.

After testing the survey, I administered it, and then analyzed the data using descriptive, univariate, and multivariate statistics. The most significant finding is that patient's satisfaction with teaching may be the most important predictor of patient's overall level of satisfaction. Overall, the study indicated that patients are satisfied with the obstetrical services they receive at WRAMC.

From a management perspective, the results could be used in resourcing decisions, marketing, and to improve patient-focused care. However, the study is only an exploratory analysis of the satisfaction level of obstetrics patients at WRAMC. Further analysis could result in more definitive relationships, especially if a larger sample size is used. Results from the analysis of the survey could lead to formulation of hypotheses for further research.

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CHAPTER 1

INTRODUCTION

Conditions which prompted the study

Walter Reed Army Medical Center (WRAMC) has a six bed labor and delivery ward, a 24 bed ante/postpartum ward, and a neonatal nursery. At the time I initiated the study, both the head nurse of the neonatal nursery (LTC Nicole B. Nater) and the head nurse of the other two wards (LTC Victoria J. Ransom) were relatively new to WRAMC. Shortly after their arrival, they started receiving a number of patient complaints which concerned them. Obstetrics patients complained about various aspects of their maternity care, particularly in regard to communication and teaching. LTC Ransom and LTC Nater wanted to implement a patient satisfaction survey and use it on a regular basis to identify and resolve patient issues. Their main objective was to improve services provided to obstetrics patients. By identifying services which were problems or patients' concerns, they could better understand and more effectively resolve those issues.

Statement of the Problem or Question

What factors in nursing services influence patient satisfaction on the obstetrics ward?

Literature Review

With the increasing competitiveness in health care, to include military health care, it is important for military health care providers and administrators to use available tools to improve patient care services while managing increasingly limited resources. Measuring and analyzing patient satisfaction provides information which may be used by both clinicians and administrators to improve the quality of services (Satariano, Briggs, and O'Neal 1987). Assessing consumers' concerns demonstrates to patients that their concerns are important and will be addressed. According to the consulting firm of Press, Ganey Associates, Inc., patient satisfaction is the most cost effective and least invasive of health care outcomes measures and should be considered a mandatory component of effective health care management (1992).

The 1994 Manual on Standards of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) identifies a need for a systematic approach to patient care evaluation. The manual specifically addresses gathering, assessing, and acting upon information related to patient satisfaction with services. It also suggests that patient satisfaction surveys are a tool which could be used by hospitals to carry out those actions (JCAHO 1993).

In their book, <u>In Search of Excellence</u>, Peters and Waterman noted that, "Probably the most important management fundamental that is being ignored today is staying close to the customer to

satisfy his needs and wants" (1982). Hospitals and health care providers have typically ignored the patients' views and followed a paternalistic approach to providing care. However, Donabedian stated that, "achieving and producing health and satisfaction, as defined for its members by a particular society or subculture is the ultimate validator of the quality of care" (1966). Kerfoot and LeClair carried that further and stated that, "Serving the customer, the patient, should be the central organizing objective of all we do in health, because we are in the business of patient care" (1991). Hospitals are now increasingly administering patient satisfaction surveys to elicit and evaluate patients' perceptions of care. Patients are also more aware of their choices and want to be actively involved in their treatment (Frederick, Sharp, and Atkins 1988).

Higher levels of patient satisfaction may result in better patient compliance, better communication, increased likelihood of return for care, and thus, better patient outcomes (Cleary and McNeil 1988, Donabedian 1988, and Locker and Dunt 1978). This is especially important on an obstetrics ward where patients are discharged quickly after delivery and are responsible for their own care and that of their newborns (Romito and Zalateo 1992).

Mothers are also generally the "health care finders" for their own families; that is, their experiences with a health care system determine where the rest of the family goes for care. If their experiences are negative, they will seek other options (Conversation with LTC Victoria Ransom, February 11, 1994).

Other studies indicate that mothers who are satisfied with their care are more likely to say that they would return to the same hospital to deliver again (Bond and Thomas 1992).

Thirty-eight percent of adult female patients receive their first experience with a hospital by using its maternity services. Fifty-eight percent of pregnant women choose a hospital because of the maternity care they expect to receive at that hospital. The other 42% of pregnant women go to a given hospital for a variety of other reasons. If they choose to seek the services of a specific physician, they receive care at the hospital where the physician has privileges. Some choose a hospital for the cost of the services. Others choose a hospital based on proximity to home. The hospital may create a natural link between the hospital and the family if the mother has a good birthing and postpartum experience. This link will increase the possibility that the entire family will visit that hospital for all its medical needs (Alexander, Sandridge, and Moore 1993).

Defining patient satisfaction is difficult due to a lack of consensus on what patient satisfaction encompasses. Some studies clearly define what they are measuring; others do not (Bond and Thomas 1992). Cleary et al. (1989) noted that there are many ways of defining and measuring patient satisfaction, with most focusing on the patient's reactions to distinct aspects of care that are measured and analyzed. Cleary et al. (1992) conducted a long-range study which indicated that to improve patient satisfaction, hospitals need to identify and improve the

processes that directly impact on and are understood by the patient.

Satisfaction is multidimensional, and it is important to measure individual aspects of satisfaction, not just overall satisfaction. Although women might be satisfied with certain aspects of the care and services they received during their childbirth experience, they might be dissatisfied with other aspects. Some studies suggest that a global dimension of overall satisfaction may be misleading (Bramadat and Driedger 1993). However, a study conducted by Green, Coupland, and Kitzinger concluded that placing the global measure at the end of the survey may help the global dimension act as a sensitivity measure of individual dimensions (1990).

Studies have shown that patients often do not understand the technical aspects of their care. They tend to focus on the aspects that are softer measures of quality, such as friendliness of staff, availability of nurses, comfort, and receipt of information (Spitzer 1988).

Patient satisfaction surveys are a tool with which to measure patient satisfaction. Surveys are often the only way that patients can make health care providers aware of their concerns, needs, and perceptions of treatment. Patients who do not want to vocally discuss problems regarding their hospital stay may write about them in a questionnaire which is not intimidating or attributional. Surveys can assist providers in identifying areas or services which need improvement. They can

also be used in risk management, such as in monitoring long-term trends and identifying where changes should be made (Weisman and Koch 1989). According to LTC Forrestall, former chief of the Quality Improvement office, one of the tools used in risk management is to look for trends in care provided to patients and determine if there are recurring problems that need to be corrected. As an example of long-term trends, night shift nursing staff might not be providing pain medication to patients as prescribed, because they do not want to leave the nurse's station, or because they are too short-staffed to make enough checks on patients. Not providing pain medication in a timely manner may slow the healing process and will create a bad hospital experience for the patient. The survey may identify the problem, allowing supervisors to investigate the cause. Clinical supervisors may also use satisfaction surveys as a quality improvement tool or for staff evaluation. Patient satisfaction surveys may raise valid quality of care or quality of service issues. Supervisors may include patient satisfaction or dissatisfaction with services or staff interaction in their evaluations of their staff. Administrators may determine if there are resourcing or management problems.

In using patient satisfaction surveys to improve patient services, the surveys need to be service specific, deal with actual patient experiences, and be detailed enough to adequately show where improvements could be made (Locker and Dunt 1978 and Alexander, Sandridge, and Moore 1993). Cleary's study indicated

that in measuring the satisfaction levels of obstetrics patients,

satisfaction with nurses, physicians, and the hospital room were

the predictors of overall patient satisfaction (Cleary et al.

1989). Other studies have noted that patients' opinions of

nursing services were an important, if not the most important,

factor in determining overall hospital satisfaction (Lemke 1987

and Guzman et al. 1988). This is most likely due to the nursing

staff's greater contact with patients, and patients using that

contact to gauge all aspects of care. Bond and Thomas discuss a

global measure of patient satisfaction with nursing care. They

cite a study by C. Martin related to childbirth experiences which

determined that mothers who were satisfied with certain aspects

of nursing care were more likely to want to return to the same

hospital to deliver again (1992).

Health care providers and those capable of implementing

changes must be patient-focused if patient satisfaction surveys

are to be useful. Clinicians and administrators must be willing

to see the delivery of care the way the patient views the receipt

of it, and they must be willing to make services more patient-

oriented (Locker and Dunt 1978). Health care professionals and

patients have different perspectives, and what the professional

might view as important might not be what the patient views as

important (Bond and Thomas 1992).

Understanding the patient's point of view is also important

in the military health care setting. LTC Andrew Cornell, Chief

of the Coordinated Care Office at WRAMC stated at a Case

Management Symposium that one of the options being considered in restructuring military health care is for military beneficiaries to enroll in one of several plans of care. Beneficiaries may choose to continue using military medical facilities, or they may opt out of the military health care system and choose some form of civilian contracted managed care. A key point is that beneficiaries must choose a plan. Therefore, it is incumbent upon military health care providers to understand the needs, expectations, and perceptions of their beneficiaries and try to meet them. They must provide patient-focused care; that is, care should be provided to best meet the needs of the patients, not the physicians, staff, or some other party. If beneficiaries feel that the military system does not address their needs, they will choose other options (Cornell 1994).

In summary, the literature identifies a number of key factors which can influence patient satisfaction in a variety of ways. For the purposes of this study, I developed a questionnaire which contained items to measure and analyze some of those factors. I focused on various aspects of nursing services provided to patients on the obstetrics ward.

Purpose (Variables/Working Hypothesis)

I used the patient satisfaction survey to evaluate the impact of nursing services on the overall satisfaction of obstetrics patients at WRAMC. Specifically, I evaluated the teaching provided to patients by the nursing staff, the

communication between the patient and the nursing staff, the patients' perceptions of the physical care provided, the interaction between patients and staff, the mother/baby interaction, the interaction between the family and the baby, and some of the ancillary services on which nursing has an impact. I also developed a global satisfaction dimension to evaluate patients' overall level of satisfaction and how the specific variables affected it.

CHAPTER 2

METHODS AND PROCEDURES

The subjects studied were a convenience sample of consecutive postpartum maternity patients seventeen years and over admitted to the obstetrics ward at WRAMC. At the time I initiated the study, approximately eighty patients were delivering babies each month at WRAMC.

Since I did not find an instrument which specifically addressed what I wanted to assess in the area of maternity services, I developed a questionnaire. I adapted a decision tree on locating and obtaining nursing research instruments which guided me in my development process (see Figure 1) (Reinick 1991). According to Warwick and Lininger (1975), there are two basic goals in designing a questionnaire. The first is to obtain information relevant to the purposes of the survey, and the second is to collect the information with maximal reliability and validity.

I obtained input from various sources. First, I sat down with the head nurses of the obstetrics wards and newborn nursery and one of the staff nurses. We discussed what information they wanted to learn and what they wanted out of the survey. We used my recent labor and delivery and postpartum experience at WRAMC as a case study and analyzed the positive and negative things

Figure 1.-- Decision Tree

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What are the concepts to be measured?

Develop framework for the study

Were the instruments reliable, valid, and feasible?

Yes

Have others measured the concepts?

No

Modify or construct the instrument.

Yes

No

Obtain permission to use the instrument.

Have expert panel review the instrument.

Modify

Yes

Does the instrument need to be modified?

No

Pilot test the instrument.

Yes

Does the instrument need to be modified based on reliability analysis?

Modify the instrument.

No

Administer the final test.

Obtain reliability and validity data from administration of the instrument.

Conduct analysis.

Adapted from Carol Reinick's decision tree on locating and obtaining nursing research instruments (1991).

which happened to me and my family. The nurses were particularly interested in obtaining positive and negative feedback on how well they were teaching new mothers to take care of themselves and their babies. They also wanted to know how well the nursing staff provided physical and emotional care to the patients and how well the nursing staff communicated with the patients and families, both in listening and in passing on information.

I then gathered relevant information from a review of other research conducted on patient satisfaction in general, and maternity services in particular. I did not find a survey tool which met my needs, so I used pertinent concepts found in the literature to develop my survey.

I referred to Emory's guidelines on survey instrument design in constructing the questions and developing a questionnaire (1985). I completed a draft questionnaire which was organized into the six independent variables plus descriptive factual information, a global satisfaction dimension, and open-ended questions. The open-ended questions were not used in my analysis. I included the open-ended questions for the benefit of the head nurses of the obstetrics wards and newborn nursery. The head nurses wanted a section which would allow respondents to address concerns which the survey did not cover or about which they felt the survey was not sufficiently specific.

The six constructs studied were: satisfaction with teaching, communication, physical care, patient/staff interaction, mother/baby/family interaction, and ancillary services. The

dependent variable was the overall level of patient satisfaction of maternity patients. I originally developed six pages of statements which I refined based upon the results of my pre-test of 47 patients. I chose not to disguise the purpose of the questionnaire to make the survey as easy as possible for respondents to complete.[1] I divided my questions into the dimensions I was testing, so that respondents would better understand what I was asking them. I followed Crocker and Algina's guidelines for developing a Likert summated rating scale (1986). This allows respondents to indicate their intensity of feeling in agreeing or disagreeing with the assertions on a five point scale.

In order to interpret the results, the survey must be reliable (Kerlinger 1986). Except for the open-ended questions, I used a structured questionnaire to provide the dimensions in which to frame the responses. I did this to help ensure the reliability of the questionnaire (Churchill 1983). A structured questionnaire should also make the questions easier to answer and the answers easier to code and analyze. I tried to use questions that were as clear and unambiguous as possible to decrease the chance of multiple interpretations. I followed the guidelines for question-writing provided by Warwick and Lininger (1975).

A panel of experts reviewed the initial list of questions (Appendix A) included in the questionnaire. They helped to

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[1] Disguising a questionnaire means to prepare the survey so that the respondents would not know what I was trying to evaluate. Some surveys are disguised to prevent respondents from trying to second guess the tester.

establish the content validity of my survey instrument by ensuring that the questions were addressing what I wanted to measure. The panel included: LTC Victoria J. Ransom, head nurse of the obstetrics wards; MAJ (Dr.) Timothy J. Boley, the chief of the obstetrics service; an obstetrics patient; Ms. Laurel Meaney, the patient representative; and COL Irene Rich, the Assistant Chief of the Nursing Research Service. They evaluated the survey for ambiguity, redundancy, accuracy, and meaning.

After receiving their input, I refined the survey (Appendix B). I then administered a pre-test over a five week period. To control for extraneous factors and increase the response level, I personally administered the survey. Research indicates that presenting the questionnaire at the treatment facility increases the response rate (Kelly-Heidenthal 1992).

I visited the postpartum ward every morning or every other morning to include weekends and checked the nurses' board to determine who would be discharged that day. By administering the survey on the day of discharge, the experience would be fresh, the emotions surrounding it would be strong, and the subjects would be most likely to inform someone of their perceptions. Normally, I would see c-section patients on their third day after delivery and patients who delivered vaginally on their first or second day after delivery. I introduced myself, explained the purpose of the survey, and asked the patients if they would complete the survey. To demonstrate impartiality to the patients, I also explained that I am not a clinician, but an

administrator and that I am not associated with the obstetrics/gynecology department or wards. Some of the patients appreciated that I was not a clinical staff member on the ward. It did not matter to others. I left the survey with the patient and would return later to answer any more questions and collect the questionnaire.

By maintaining confidentiality and using no coercion, I adhered to ethical standards and insured that respondents were not influenced by outside factors. I asked the subjects to complete the survey and emphasized that doing so was voluntary. I also asked them not to sign the survey or give any other indication as to who completed it, so I could ensure confidentiality.

The purpose of the pre-test was to test the reliability of my survey tool and to ensure that the questions were grouped together appropriately to measure specific dimensions. The pre-test allowed me to assess the individual questions, their sequence, and the dimensions. I could then refine my survey and administer the final test with which I would conduct univariate and multivariate statistical tests. I completed the statistical analysis for the pre-test using the Statistical Package for the Social Sciences for Windows, Release 6.0 (SPSS for Windows Rel. 6). I examined the level of reliability using the procedure RELIABILITY in SPSS for Windows, which computes the reliability coefficient, Cronbach's alpha. If Cronbach's alpha ≥ 0.7, then the average score for that dimension was computed.

I coded the data and entered it into the statistical software, SPSS for Windows. I accounted for missing data by coding for "not aware of", "out of range", "legitimate skip", and "omitted". I verified my input and then ran frequency tables on each item. Following that, I analyzed the reliability coefficient, Cronbach's alpha, for each variable (SPSS for Windows Rel. 6).

Based on the results of the pre-test, I further refined the survey and then administered the final questionnaire (Appendix C). With an average caseload of eighty patients per month, I expected a potential sample size of 160 for a two month period.

For the final test, I followed the same steps used in coding and analyzing the pre-test. I coded and entered the data into SPSS for Windows. I again accounted for missing data by coding for "not aware of", "out of range", legitimate skip", and "omitted". I verified my input and ran frequency tables on each item. I then analyzed the reliability coefficient, Cronbach's alpha for each variable.

I used the student edition of the software program Statistix, version 4.0, to analyze demographic and clinical characteristics of the sample using descriptive statistics.

I derived a summative scale score for each dimension by summing the ratings for the items. I presented the score for each of the seven items of satisfaction and the overall satisfaction level as a mean $\pm$ the standard deviation and as a frequency distribution. Because the number of questions in each

dimension differed, I averaged the scores for each dimension. I also examined correlations among the eight scores using Pearson's correlation coefficient.

The primary response variable was the overall score for satisfaction. I used multiple regression analysis with SPSS for Windows to examine the contribution of the seven satisfaction items to the variability in the overall satisfaction score.

Using Statistix 4.0, I did exploratory analysis of the association between demographic (e.g. age, number of previous deliveries) and clinical (e.g. type of delivery, day of delivery, complications) factors, and satisfaction levels through two sample t-tests, one-way analysis of variance (ANOVA), and correlation analysis, as appropriate. I looked for statistical significance at the .05 level or beyond.

Because I conducted a study and involved human subjects, I had to prepare a request for a protocol approval by the Department of Clinical Investigations. The Clinical Investigation Committee reviewed and approved the protocol on March 22, 1994 (Appendix D). I followed committee protocols in administering the survey.

CHAPTER 3

RESULTS

The most significant finding that I discovered in my analysis is that patients' satisfaction with teaching may be the single most important predictor of patients' overall level of satisfaction with the obstetrics services they receive at WRAMC. Other factors which may predict obstetrics patients' satisfaction are the number of other children the patients have had and whether or not they have ever attended a birthing class. Differences in perceptions of the specific dimensions of satisfaction by various patient categories also indicated that teaching was the most important factor of satisfaction.

Using the student edition of Statistix, version 4.0, I provided descriptive statistics on the demographic and clinical factors. I presented the results for the pre-test in Tables 1 and 2 and for the test in Tables 4 and 5. I also computed the mean scores, standard deviations, and item-total correlations for each item for both the pre-test (see Table 3) and the test (see Table 6).

Table 1.-- Frequency Distribution of Demographic Factors
(Pre-test, N=46)

Factor	N	%
Number of other children		
0	26	56.5
1	15	32.6
2	2	4.3
3	3	2.2
4	2	4.3
Military status		
Active duty	14	30.4
Family member	32	69.6
Level of education		
Less than high school	2	4.3
High school	13	28.3
Attended College	41	67.4
Age class		
< 20 years	2	4.3
20-29 years	30	65.1
30-39 years	11	23.9
40 + years	1	2.2

Table 2.-- Frequency Distribution of Clinical Factors
(Pre-test, N=46)

Factor	N	%	Factor	N	%
Type of delivery					
c-section	14	30.4			
vaginal	30	65.2			
Birthing class					
Yes	21	45.7			
No	25	54.3			
			Day of delivery		
* Comp ob patient			Sunday	7	15.2
Yes	18	39.1	Monday	5	10.9
No	28	60.9	Tuesday	4	8.7
			Wednesday	9	19.6
Nursery level			Thursday	6	13.0
Newborn nursery	30	65.2	Friday	5	10.9
Intermediate	9	19.6	Saturday	9	19.6
NICU	6	13.0			
			Weekday/weekend		
Type of feeding			Weekday	29	63.1
Breastfeed	19	41.3	Weekend	16	34.8
Bottlefeed	11	23.9			
Both	16	34.8			

* Complicated obstetrics patient - self-reported

Table 3.-- Individual Item Statistics for the Pre-test
(1 = Very Satisfied, 5 = Very Dissatisfied)

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
A1	3.13	2.13	*	
A2	4.15	2.06	*	
A3	1.86	0.75	.8276	
A4	1.71	0.74	.7123	
A5	1.63	0.73	.7272	
A6	1.79	0.77	.7730	
A7	1.74	0.73	.7942	
A8	1.88	0.86	.8038	
B1	2.26	0.95	.3698	
B2	1.73	0.78	.4386	
B3	1.67	0.63	.6978	
B4	1.60	0.54	.5950	
B5	1.37	0.49	.6148	
B6	1.46	0.62	.6171	
B7	1.70	0.73	.7112	
B8	1.65	0.77	.6087	
B9	1.44	0.66	.6825	
B10	1.50	0.62	.7092	
B11	1.44	0.66	.5505	
C1	1.67	0.81	.6225	.6300
C2	1.40	0.72	.6103	.6200
C3	1.52	0.66	.5083	.5072
C4	1.78	0.71	.3492	.3805
C5	1.65	0.64	.3485	.3807
C6	1.70	0.89	.7325	.7192
C7	1.98	0.91	.6637	.6776

Table 3.-- Continued

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
C8	1.65	0.57	.5468	.5666
C9	1.84	0.80	.0912	*
C10	1.39	0.49	.5937	.5736
C11	1.59	0.65	.6179	.6158
C12	1.70	0.66	.5417	.5311
D1	1.76	0.85	.6587	
D2	1.38	0.81	.6072	
D3	1.50	0.75	.6647	
D4	1.40	0.54	.3574	
D5	1.57	0.66	.7978	
D6	1.70	0.66	.7301	
D7	1.47	0.73	.5723	
D8	1.54	0.59	.7011	
D9	1.58	0.58	.6803	
D10	1.76	0.68	.8027	
D11	1.59	0.62	.7978	
D12	1.67	0.82	.7369	
D13	1.78	0.87	.7479	
D14	1.96	0.77	.4798	
D15	1.67	0.60	.6277	
D16	1.60	0.54	.6603	
E1	1.80	0.85	.3893	.6685
E2	1.56	0.80	.2378	.6530
E3	1.77	0.87	.1676	*
E4	1.93	1.03	.3508	.7462
E5	1.90	1.02	.5847	.8756

Table 3.-- Continued

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
E6	1.74	0.66	.6470	.7029
E7	1.73	0.80	.5749	.5284
E8	1.24	0.43	.1142	.3493
F1	2.18	0.96	.4274	
F2	1.87	0.83	.6223	
F3	2.02	0.77	.5770	
F4	1.99	0.93	.5451	
F5	1.83	0.68	.5478	
F6	1.72	0.72	.6865	
F7	1.70	0.55	.8025	
O1	1.67	0.97	.8049	
O2	1.65	0.90	.7956	
O3	1.33	0.56	.3431	
O4	1.61	0.84	.2876	
O5	1.67	0.70	.7705	
O6	1.85	1.17	.6118	

*Item deleted

Table 4.-- Frequency Distribution of Demographic Factors
(Test, N=67)

Factor	N	%
Number of other children		
0	38	57.6
1	12	18.2
2	11	16.7
3	2	3.0
4	3	4.5
Military status		
Active duty	23	34.4
Family member	44	65.7
Level of education		
Less than high school	1	1.5
High school	21	31.3
Attended College	45	67.2
Age class		
< 20 years	6	9.0
20-29 years	35	52.2
30-39 years	25	37.3
40 + years	1	1.5

Table 5.-- Frequency Distribution of Clinical Factors
(Test, N=67)

Factor	N	%	Factor	N	%
Type of delivery			Prenatal care		
c-section	27	40.3	WRAMC	36	54.5
vaginal	40	59.7	Ft. Belvoir	5	7.6
			Ft. Meade	11	16.7
Birthing class			Malcolm Grow	1	1.5
Yes	35	52.2	Other	13	19.7
No	32	47.8			
			Day of delivery		
* Comp ob patient			Sunday	11	16.4
Yes	31	47.0	Monday	11	16.4
No	35	53.0	Tuesday	10	14.9
			Wednesday	9	13.4
Nursery level			Thursday	9	13.4
Newborn nursery	41	64.1	Friday	7	10.4
Intermediate	11	17.2	Saturday	10	14.9
NICU	12	18.8			
			Weekday/weekend		
Type of feeding			Weekday	46	68.7
Breastfeed	24	35.8	Weekend	21	31.3
Bottlefeed	22	32.8			
Both	21	31.3			

* Complicated obstetrics patient - self-reported

Table 6.-- Individual Item Statistics for the Test
(5 = Very Satisfied, 1 = Very Dissatisfied)

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
A1	4.31	1.20	.2138	*
A2	4.30	1.20	.1435	*
A3	4.31	0.66	.3960	.6482
A4	4.03	0.84	.3873	.6022
A5	4.06	0.84	.4716	.6190
A6	4.14	0.92	.4888	.7168
A7	4.34	0.81	.4719	.6499
A8	4.01	1.02	.4470	.6915
B1	3.56	1.25	.6119	
B2	4.31	0.89	.6363	
B3	4.10	0.86	.7718	
B4	4.05	1.11	.7957	
B5	4.42	0.87	.7461	
B6	4.20	1.05	.8096	
B7	4.31	0.85	.7291	
B8	4.30	0.90	.6629	
B9	4.21	1.04	.7752	
B10	4.10	0.99	.7631	
B11	4.19	0.98	.5356	
C1	4.30	0.93	.3651	*
C2	4.56	0.69	.5590	.5477
C3	4.30	0.78	.6422	.6397
C4	3.86	1.20	.6349	.6431
C5	4.08	1.00	.6350	.6315
C6	4.11	0.91	.7795	.7864
C7	4.10	0.93	.6429	.6489

Table 6.— Continued

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
C8	4.18	0.98	.6939	6962
C9	4.51	0.64	.7740	.7836
C10	4.31	0.92	.7257	.7221
C11	4.16	1.05	.6774	.6790
D1	4.34	0.84	.6461	
D2	4.75	0.54	.5314	
D3	4.47	0.75	.6999	
D4	4.37	1.02	.4390	
D5	4.39	0.79	.6722	
D6	4.31	0.81	.7231	
D7	4.33	0.90	.3811	
D8	4.34	0.85	.8232	
D9	4.21	0.87	.8134	
D10	4.12	0.95	.7878	
D11	4.28	0.89	.8866	
D12	4.17	1.05	.8653	
D13	4.11	0.96	.8190	
D14	3.77	1.15	.4651	
D15	3.72	1.18	.8004	
D16	4.18	0.88	.8755	
E1	4.00	0.66	**.4531	***.7271
E2	4.31	0.90	**.5710	***.7536
E3	4.67	1.24	**.4715	***.5444
E4	4.35	0.78	**.5369	***.7054
E5	4.00	1.00	**.8444	***.7132

Table 6.-- Continued

Item Number	Mean Score	Standard Deviation	Item-Total Correlation	Itm-Ttl changes
E6	4.00	1.27	**.8493	***.2838
E7	4.21	0.95	**.5888	***.2545
E8	4.02	1.05	**.7648	***.5808
F1	3.66	1.24	.5487	
F2	3.94	1.04	.5249	
F3	3.84	1.06	.7081	
F4	3.83	1.26	.6745	
F5	4.03	1.07	.6852	
F6	4.32	0.79	.6150	
F7	3.43	1.33	.6291	
F8	3.46	1.32	.6769	
O1	4.42	0.68	.4376	.4220
O2	4.25	0.71	.7525	.7673
O3	4.47	0.61	.7083	.5614
O4	4.56	0.59	.6527	.7193
O5	4.37	0.68	.4317	.5299
O6	3.94	0.86	.6690	.7227
O7	4.06	1.18	.3568	*

* Item deleted
** Items E1-E4 and E5-E8 considered separately
*** Items E1-E8 considered together

I used the procedure RELIABILITY in SPSS for Windows to determine Cronbach's alpha for each of the dimensions I was testing. I analyzed the reliability of my survey instrument in both the pre-test and test. The results are presented in Table 7 (SPSS for Windows Rel. 6).

Table 7.-- Reliability Analysis of the Pre-test and Test

Dimension	Cronbach's alpha	
	Pre-test	Test
	N=46	N=67
Teaching	.9199	.8621
Communication	.8704	.9324
Physical care	.8656	.9126
Patient/staff interaction	.9352	.9456
Mother/baby interaction	.6984	.7292
Family interaction	.8610	.8883
Mother/family/baby interaction	.6336	.8324
Ancillary services	.8486	.8746
Overall satisfaction	.8208	.8409

Since the purpose of the pre-test was only to measure the reliability of the survey instrument and to ensure the questions were appropriately representing the dimensions, I did not conduct further analysis on the pre-test data. I presented the means for the dimensions in Table 8.

Table 8.—— Means of the Dimensions

Dimension	Mean scale score	Number of items	Mean
Teaching	22.45	6	3.74
Communication	45.06	11	4.10
Physical care	41.63	10	4.16
Mother/staff interaction	65.85	15	4.39
Mother/family/baby interaction	30.18	8	3.77
Mother/baby interaction	16.70	4	4.18
Family interaction	13.68	4	3.42
Ancillary services	30.46	8	3.81
Overall Satisfaction	25.15	6	4.19

I explored the association between demographic and clinical factors and the various dimensions of satisfaction levels using univariate statistics (two sample t-tests and one-way analysis of variance (ANOVA)). Significant results are in Table 9 (Statistix ver. 4.0).

Table 9.-- Significant Univariate Statistics

T-tests				
Dimension/Factor	**Mean**	**N**	**S.D.**	**p value**
Teaching/comp ob patient				p=.01
Yes	20.57	30	6.87	
No	24.49	33	4.65	
Satisfaction/education level				p=.049
High School	26.48	21	2.58	
Attended College	24.73	44	3.57	
One-way ANOVA				
Dimension/Factor	**Mean**	**N**	**S.D.**	**p value**
Communication/nursery				p=.0075
Newborn nursery	23.59	39	5.23	
Intermediate	23.27	11	6.47	
NICU	17.27	11	6.77	
Teaching/type feeding				p=.0167
Breastfeed	19.75	24	6.37	
Bottlefeed	24.84	19	5.11	
Both	23.38	21	5.94	

I then conducted multivariate testing using multiple regression in SPSS for Windows. I presented the significant results in Figures 2 and 3.

Figure 2. -- Significant Predictors of Satisfaction

Satisfaction

1.

$Beta = .56^{***}$

Teaching ━━━━━━━━━━━━━━━━━━ **Satisfaction**

R = .46

Dimensions of satisfaction only

2.

Teaching

$Beta = .66^{***}$

Satisfaction

$Beta = .36^{**}$

Number of kids ━━━━━━━━━━━━━━━

R = .55

$Beta = .25^{*}$

**Birthing class**

Dimensions of satisfaction & demographic and clinical variables

* $p < .05$

** $p < .01$

*** $p < .001$
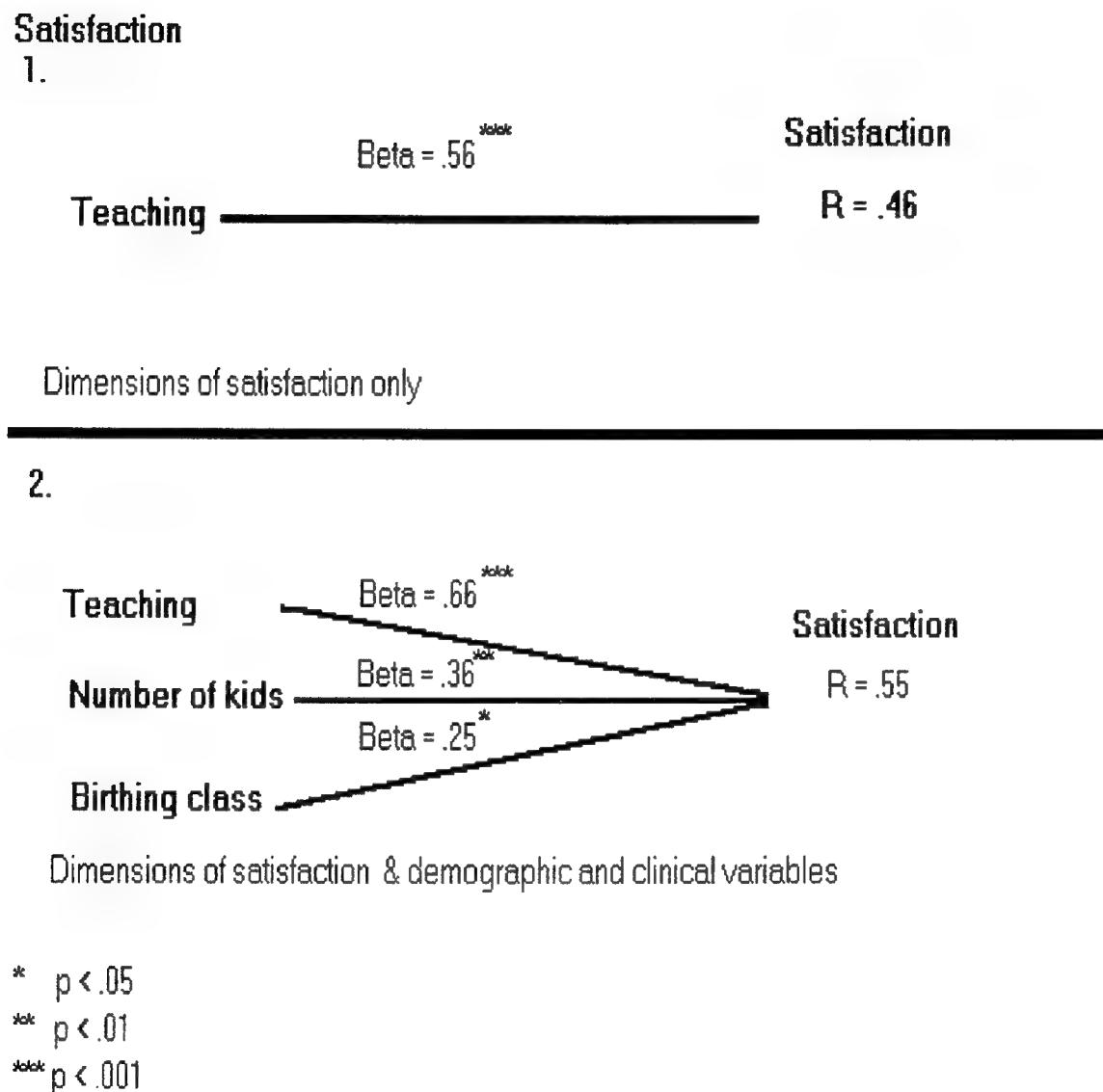
Figure 3. -- Predictors of Return Delivery

Baby's care   Beta = .33*   Deliver Again

Beta = .01*   R = .34

Expectations
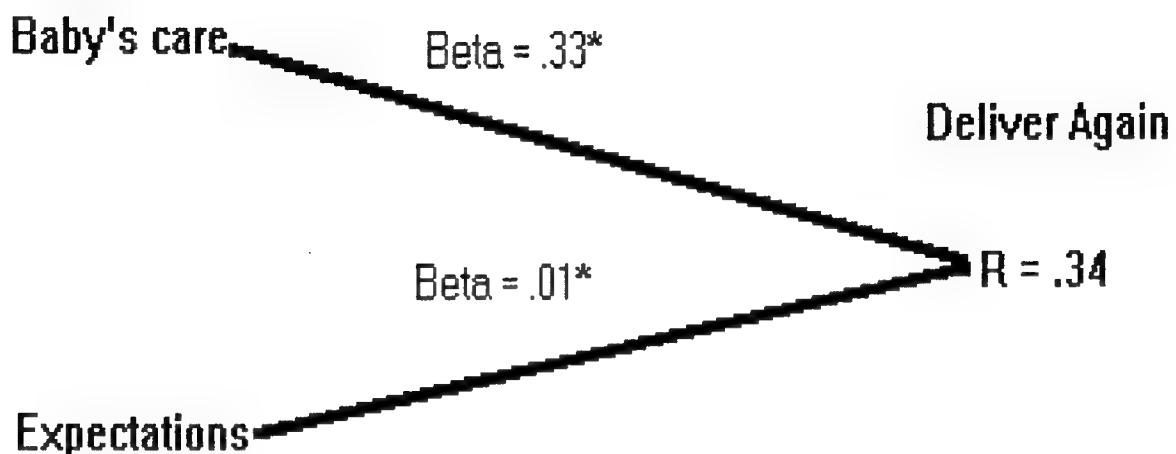
Dimensions reported only for those exhibiting significant direct effects (Betas)

*p < .05

CHAPTER 4

DISCUSSION

Pre-test

For the pre-test, I distributed 48 surveys and received 46 back. I started the pre-test on 24 March 1994 and finished it on 3 May 1994.

I coded and entered the data. I made a random 20% check of data entry, with 100% accuracy of the data input. I computed descriptive statistics for the demographic and clinical variables (see Tables 1 and 2). I also computed the mean score, standard deviation, and item-total correlation for each item (see Table 3). I then calculated Cronbach's alpha for each dimension using the procedure RELIABILITY in SPSS for Windows (see Table 7). Cronbach's alpha, often termed the coefficient alpha, provides an estimate of the reliability of a scale, based on the correlation among items and the number of items (Nunnally 1978). I also performed factor analysis on those dimensions demonstrating lower reliabilities to determine if there might be more than one factor present (SPSS for Windows Rel. 6).

Cronbach's alpha for the construct, teaching, was .9199 and each item within teaching was an important contributor (item-total correlation > .30). I did not include the first two questions in my analysis, because there was some confusion in answering them. I reworded question 4 in the background section

to mean if the patient had ever attended a birthing class anywhere. Some patients thought it only pertained to WRAMC's birthing class. The video tape question brought out a problem, because the nurses have not been consistent in explaining tape availability. Some of the nurses say that there are educational video tapes available on various aspects of maternal-child healthcare for patients to watch, and that is why I included the question initially. However, most of the patients were not informed about any educational videos, and LTC Ransom said she was unaware of them. LTC Ransom said she would find out how to make them accessible to the patients for viewing during their stay in the hospital. Based on that assurance, I retained the question for the test. The other issue under teaching was that a mother who is discharged before her baby is not taught how to take care of the baby until the baby is discharged. I rearranged the section, so that those mothers would skip those questions pertaining to baby care.

Under the construct, communication, Cronbach's alpha is .8704 indicating a high degree of reliability. Using factor analysis, the first question marginally loaded with the construct of communication; that is, the question contributed to the scale, but not to a large degree. However, I decided to retain the question to see how it would do in a larger sample size.

In the dimension of physical care, question 1 was confusing, because some patients received prenatal care at clinics other than the one at WRAMC. I reworded the question in this section

and added a question in the background section to determine where they had received the majority of their prenatal care. Cronbach's alpha was .8484; however, question 9 pertaining to length of stay did not measure physical care. After talking to COL Baird, the Chief of Child and Maternal Health Services, and to LTC Ransom, I decided to delete the question. They both stated that length of stay is an area over which they have little control, and since they cannot change it, its measurement serves no purpose. I then recomputed Cronbach's alpha without the length of stay question, and it increased to .8656. Questions 4 and 5 were borderline, that is, their Cronbach's alpha had a low measurement, but they did contribute to the scale, so I kept them.

I then analyzed patient/staff interaction. The first question had the same problem as in physical care, and I corrected it. Cronbach's alpha was .9352. I needed to make no other changes in this section.

In mother/baby/father interaction, Cronbach's alpha was .6336 which is relatively low. I then did a factor analysis to determine if I had more than one factor, since questions 2, 3, and 8 did not appear to contribute to the scale. Factor analysis indicated that I might have two factors: questions 4, 5, 6, and 7 in one factor describing the interaction between the family and the baby and questions 1, 2, and 8 in another describing the interaction between the mother and the baby. Question 3 did not appear to fit in either one. After consulting with COL Baird and

LTC Ransom, I decided to delete question 3. The ward policy of encouraging new moms to keep their babies at all times during their hospital stay does not mesh with a question evaluating how moms feel about the babies being kept in the nursery so the mothers could rest. I then placed questions 4, 5, 6, and 7 under the construct, family interaction, and questions 1, 2, and 8 under mother/baby interaction. I added another question to this construct to have enough to scale them.

When I recomputed Cronbach's alpha for the new construct, family interaction, it was .8610 and all items contributed. Cronbach's alpha for the three existing questions under the new construct, mother/baby interaction, was .6984. This is low, but I hoped to raise it with the addition of a new item related to mother/baby interaction. The item-total correlation was a little low for question 8. Also, a larger sample size might mitigate the effects of the neonatal intensive care unit (NICU) babies which would impact on when new moms can see their babies.

In ancillary services, Cronbach's alpha was .8486. It was interesting to note that question 7 correlated at .8025 with the total scale. Question 7 refers to the cleanliness of the room, and therefore profoundly represents the global construct; that is, 80% of the scale of ancillary services is explained by how mothers felt about the cleanliness of their rooms. LTC Ransom wanted me to add a question about room temperature; otherwise, I made no changes.

In analyzing overall satisfaction, Cronbach's alpha was

.8208. Question 4 demonstrated a low item-total correlation, so I reworded it into two questions; one on the mother and one on the baby. The question might have been confusing for the mothers whose babies were remaining hospitalized. Factor analysis showed only one construct, so I made no other changes.

Test

I started the final testing on 10 May 1994 and completed it on 1 July 1994 after distributing 70 questionnaires and collecting 67 of them. There were fewer deliveries than originally anticipated. During my study, the average number of deliveries dropped from eighty to about sixty per month. The ward head nurse believed the decrease was attributed to the recent availability of epidural analgesia at DeWitt Army Community Hospital at Ft. Belvoir. Previously patients traveled the extra distance to WRAMC to have the option of this procedure. Other patients chose to deliver at the National Naval Medical Center (NNMC) at Bethesda because it has midwives and birthing rooms where patients can have their labor, delivery, and postpartum experiences in the same room. WRAMC does not provide this option to its patients. In addition, there is discussion between the Army and the Navy about moving WRAMC's obstetrics services to the National Naval Medical Center at Bethesda at some point in the near future, and this might be contributing to the decrease in the number of deliveries at WRAMC. Enough public discussion has been generated about this issue that patients receiving prenatal care at WRAMC might have heard about an

impending move, and based on this information, might have chosen to deliver at Bethesda.

I made a random 25% check of data entry, with 100% accuracy of the data input. I computed frequencies on the demographic and clinical variables (see Tables 4 and 5). I also computed the mean score, standard deviation, and item-total correlation for each item (see Table 6). I then conducted a reliability analysis on each dimension using Cronbach's alpha (see Table 7). If the item-total correlation was less than 0.30 on the individual items, it indicated low factor-loading, suggesting that the item was not part of the domain of the construct.

Descriptive statistics

The total number of cases was 67. In looking at the raw scores of the individual dimensions, patients are satisfied overall. They are less satisfied with the teaching provided, with the interaction between the mother, baby, and family, family interaction, and with the ancillary services (see Table 8).

The study included a high percentage of women with c-section deliveries, 40.3% This is probably due to WRAMC's status as a tertiary care facility as well as a teaching hospital. Many patients are referred to WRAMC from other hospitals due to complications in the pregnancy, such as multiple births (twins or triplets) or medical problems with the patient, such as preeclampsia.

Forty-seven percent of the patients classified themselves as complicated obstetrics patients. This category places a patient

in an even more emotionally and physically challenging situation than a normal, uncomplicated pregnancy due to the added amount of uncertainty associated with complications.

Nineteen percent of the patients' babies required more specialized care and were placed in the neonatal intensive care unit (NICU). Those babies also require additional and more intensive care by the parents when they are discharged. The parents already are under additional stress due to their babies' condition and want to receive enough teaching from the nurses on how to take care of these babies, so that they feel better prepared to care for the babies at home.

Almost fifty-eight percent of the patients indicated that this was their first child. This means that the majority of the patients have a lot to learn about being a mother and about the physical and emotional adjustments taking place in their lives. In our transient environment, the patients may or may not have a support network available to assist them in the transition to parenthood and rely on the hospital staff to teach them how to take care of themselves and their babies.

One-third of the patients were active duty members. In addition to the adjustments they have to make at home for a new baby, active duty patients have to make accommodations for possible effects on their work, including recognizing and handling illness in themselves or their children and understanding the normal developmental changes taking place in the infants. The more new moms know about these changes, the

better prepared they are to return to duty when their maternity leave ends.

Only half of the patients said that they had ever attended a birthing class, and many of those patients already had children. Fully one fourth of the patients said they were not aware that birthing classes were available. Of those who had attended a birthing class, 65% felt that the class helped to prepare them for the labor and delivery and postpartum experience. Only 4.5% of the patients who attended a class felt that their class did not prepare them, the rest were neutral on the matter.

Sixty-seven percent of the patients stated that they had at least some college education. Only one patient had not completed high school.

How patients chose to feed their babies was evenly distributed. One-third of the patients each selected breastfeeding, bottlefeeding, or both.

Almost fifty-five percent of the patients indicated that they had received the majority of their prenatal care at WRAMC. Almost twenty percent had received their prenatal care outside the Washington, D.C. area; of those, most had been referred from Europe and were complicated obstetrics patients. The other twenty-five percent had received their care at Kimbrough Army Community Hospital at Ft. Meade, DeWitt Army Community Hospital at Ft. Belvoir, and Malcolm Grow Medical Center at Andrews Air Force Base.

This study did not have a preponderance of patients

delivering on one day over the others. Some studies have shown that c-section deliveries are more likely to be done on Fridays due to physicians not wanting to come in on the weekends to deliver. This has resulted in patients dissatisfied with their care, because they feel that their birthing experience was based on the convenience of the health care providers and not on the patients.

The mean age of the patients was 27.4 with a standard deviation of 6.0. The range was 17-42 years. Fifty-two percent of the patients were between twenty and twenty-nine years of age. Thirty-seven percent were between thirty and thirty-nine years of age.

Reliability analysis

For the teaching dimension, I had retained the questions about the birthing classes and video tapes even though they were a problem on the pre-test. LTC Ransom thought the concerns with them would be resolved on the final test, but they were not. The questions still demonstrated that they were separate from the global teaching construct, and I deleted them in my analysis. With them, Cronbach's alpha was .7367. Without them, it was .8621.

For the dimension of communication, Cronbach's alpha was .9324. A high measurement indicates a high level of the reliability of the scale.

After reviewing the dimension of physical care, I chose to delete the question on satisfaction with physical care in the

obstetrics clinic. Although it was an acceptable score, there was enough of a difference to show that satisfaction with the obstetrics clinics did not relate to satisfaction with care received on the wards. I believe this could be due not only to the women receiving their clinic care at different sites, but to the vast difference in the elements of care received in the clinics. I had included it initially, because I was curious to see if the prenatal care patients received affected their satisfaction level with their birthing experience. Before deleting the item, Cronbach's alpha was .9065. After deletion, it was .9126.

In the dimension of patient/staff interaction, Cronbach's alpha was .9456. Again, a high score indicates a high degree of reliability with the scale, and the individual items contributed significantly to the scale.

I had separated the dimension of mother/father/baby interaction into mother/baby interaction and family interaction after the pre-test. I measured Cronbach's alpha for two separate dimensions (mother/baby interaction and family interaction), and also for one dimension with all eight items (mother/family/baby interaction). Cronbach's alpha was .7292 for mother/baby interaction and .8883 for family interaction. Cronbach's alpha for the combined dimension of mother/family/baby interaction was .8324.

Cronbach's alpha for ancillary services was .8746. This score indicates a high degree of reliability of the scale, and

all items contributed significantly to the scale.

I measured Cronbach's alpha for overall satisfaction at .8309. The item-total correlation for the question on delivering again at WRAMC was .3568 which is an acceptable score; however, the question did not contribute as much to measuring the dimension of overall satisfaction. When I deleted it, Cronbach's alpha increased to .8409. I then had a summative scale for overall satisfaction.

<u>Univariate statistics</u>

Significant Differences between Groups

I conducted statistical tests, including t-tests and one-way ANOVA, to evaluate the effect of the demographic and clinical data on the satisfaction dimensions. Four items yielded significant results (see Table 9).

Obstetrics patients who stated they had complicated pregnancies were significantly less satisfied with the teaching provided to them than were patients who did not report complications. I speculate that those patients have had a more difficult time during pregnancy and face more challenges at home with a new baby than persons with uncomplicated pregnancies. They might have more questions and more concerns that are not being addressed by the staff.

Statistically, patients with some college were significantly less satisfied overall with the obstetrics services provided than were patients with only a high school education. This is consistent with other studies which indicate that the more

educated the patients are, the less likely they are to be satisfied with their childbirth experience (Bramadat and Driedger 1993). Part of this could be because they want to know more about what is going on with their care. They may also want to have some say in the provision of care provided to them.

New moms whose babies were in the NICU were significantly less satisfied with the teaching provided to them than were moms whose babies were only in the intermediate or newborn nurseries. This could be a similar situation to the patients with complicated pregnancies in that they have more questions, concerns, and apprehensions about taking care of their infants than would new mothers whose babies were born without complications.

Moms who chose to breastfeed were also significantly less satisfied with the teaching provided to them than were moms who chose to bottlefeed or both breastfeed and bottlefeed. The current trend is for nursing staffs to encourage new mothers to breastfeed, and the neonatal literature recommends that moms breastfeed, but it is not easy to initiate. Breastfeeding is a learned process, and the nursing staff did not always have the time to assist new mothers in breastfeeding or explain what was expected and what was normal or abnormal. Mothers would become frustrated with trying to breastfeed a crying infant. They were also concerned about having no milk to feed them because they were only producing colostrum. Many did not have other family members available to teach them about breastfeeding or to provide

encouragement in their efforts.

It is important to note that satisfaction with teaching is a dominant factor in this analysis. Certain categories of patients were more likely to be dissatisfied with the teaching provided, including: complicated obstetrics patients, mothers whose babies were in the NICU, and new moms who wanted to breastfeed their infants. These mothers are most likely to require extra communication, attention, and reassurance. They are less likely to be familiar with or understand what is happening and require more information to satisfy their concerns. This is consistent with other studies which indicate that mothers are looking for more education and support with infant care and feeding (Watters and Kristiansen 1989).

Cleary et al. noted that problems with patient satisfaction in teaching may not be a problem with teaching, but a need to improve communication (1991). Patient satisfaction is based on a patient's perceptions of what happened, not necessarily what actually occurred. If a patient does not remember being given information, then the patient has not learned and communication has failed.

Levels of Satisfaction

In evaluating the items within the dimensions, patients appeared satisfied overall with teaching. The means for each item were above 4.0 on a scale of one to five with five representing greatest satisfaction.

Patients seemed satisfied with the communication provided

except in the orientation to the ward. They were not as satisfied with the information provided on ward policies and procedures, as demonstrated by a mean of 3.5.

In the area of physical care provided, patients stated that they were satisfied with most aspects, except in the area of the nursing staff's response to their requests for pain medication which had a mean of 3.9. Other studies have noted the delivery of pain medication as a concern in patient satisfaction. A study by Cleary et al. discussed a particular hospital's problems with patient dissatisfaction with response to pain medication requests. The hospital implemented a successful patient-controlled analgesia (PCA) program (1991).

There was also a difference in the patients' perceptions of the quality of nursing care based on time of day. The day shift had a mean score of 4.5 for satisfaction, while the evening shift had a mean of 4.3, and the night shift had a mean of 4.2. No patients indicated that they were very dissatisfied with the day shift, but some indicated that they were very dissatisfied with the evening or night shifts. However, there was not a statistically significant difference among the shifts.

In the area of interaction between the patients and the staff, 73% of the patients said they were very satisfied with the interaction between themselves and the labor and delivery staff. This item yielded the highest mean score of 4.7. Fifty-eight percent said that they were very satisfied with the interaction between themselves and the staff on the obstetrics wards. This

item had a mean of 4.5. Sixty-one percent said they were very satisfied with the interaction between themselves and the nursery staff. This item yielded a mean score of 4.4.

There were two areas within personal interaction with which patients were less satisfied. Patients were less satisfied with how well the nursing staff controlled the noise level. The item had a mean score of 3.8. Also, patients were less satisfied with how the nursing staff members would present themselves as too busy to spend time with the patients. This item had a mean of 3.7 on a scale of one to five.

In the area of mother/family/baby interaction, patients were satisfied. Seventy-three percent were very satisfied with the ability to see their baby when they wanted with a mean of 4.7.

Patients were not as satisfied with the ancillary services provided. The means ranged from 3.4 for satisfaction with the room temperature to 4.3 for satisfaction with the availability of a gown and robe.

In the overall category, patients appeared satisfied or very satisfied. The lowest scores were in the items of "were the patients' expectations met" which had a mean of 3.9 and "were the patients likely to deliver again at WRAMC if given a choice" which had a mean of 4.1.

Multivariate statistics

I also used multiple regression and path analysis of my data to develop a causal model of satisfaction. Before I could do so, I had to determine if my study met three criteria. First, the

analysis of my data must be theory driven; that is, I had to ensure I had theory and previous research to support my experimental model. My study was trying to determine which nursing factors affected the overall satisfaction level of patients. I proposed that each of the ones I studied had some effect with teaching having the greatest amount of influence. Scientific literature reported earlier supported the theories tested here.

Second, one event must precede the other in time. Each of my independent variables measured elements that preceded an overall assessment of satisfaction. The overall satisfaction was a culmination of the patients' experiences and could only be fully developed at the end of a patient's stay.

Third, I could propose that a change in the dependent variable accompanied a change in the independent variable. Bivariate correlations demonstrated that changes in the level of satisfaction with the dimensions of teaching, communication, physical care, patient/staff interaction, mother/family interaction, and ancillary services, changed the patients' perceptions of the overall satisfaction level (Asher 1983).

Based on this, I used multiple regression analysis to infer which nursing services were likely to predict the overall satisfaction level of the obstetrics patients.

When I ran the multiple regression analysis, teaching was the only significant dimension which predicted overall satisfaction, Beta = .56, $p \leq .001$. The more satisfied patients

were with the teaching provided to them, the more likely they were to be satisfied overall (see Figure 2).

When I added the demographic and clinical variables, teaching was still the only significant dimension which could be used to predict patient satisfaction. There were two demographic items which were also significant: the number of other children the patient had and whether or not the patient had ever attended a birthing class. If the patients had other children or if they had ever attended a birthing class, they were more likely to be satisfied overall (see Figure 2). This is consistent with other studies which indicate that women are satisfied with their childbirth experience if they had attended a birthing class (Bramadat and Driedger 1993). This could be due to mothers' better understanding of what to expect in their labor and delivery and postpartum experience. Watters and Kristiansen's study noted that first time mothers were significantly less satisfied with the teaching provided to them (1989). New moms who had not delivered before and had not attended a birthing class were less likely to be prepared for the experience.

I also analyzed how likely new moms were to deliver again at WRAMC in terms of the other items related to overall satisfaction. Both satisfaction with having the baby's care needs met and with having their own expectations met were significant as possible predictors in the likelihood of patients choosing to deliver again at WRAMC (see Figure 3).

CHAPTER 5

Conclusions and Recommendations

It was my intent to determine which nursing services impact on the patient satisfaction levels of obstetrics patients at WRAMC and how much they impacted on satisfaction. The head nurses of the obstetrics wards and the newborn nursery intend to use those results to improve nursing services in those areas. They also intend to incorporate the survey into their new mother orientation and discharge regimen and, thus, continue to monitor patient satisfaction. Even though this tool is not being designed to assess physician care, useful information may be derived from the survey. Dr. Boley and other members of the medical staff intend to review the results to see where they might improve their care.

As in other service industries, hospitals are becoming more focused on the customer. Patients want seamless care; that is, smooth competent care that meets their needs and expectations. Patients are "shopping" for technical expertise and quality of service. The nursing and medical staff at WRAMC are intent on using this survey to concentrate on patient-focused care as opposed to staff-focused. They want the care and services they provide to be for the benefit of and most convenient for the patients, as opposed to what is most convenient for the health care providers and staff. However, in a large facility, it is

hard to focus on individual needs. It takes a conscious and concerted effort to be patient-focused.

The patient satisfaction survey which I developed can be used in a variety of ways. On a general level, the survey may be used as a quality improvement tool in patient teaching. The instrument may also identify specific quality of care issues which should be addressed, and the survey may focus on hospital procedures and processes which could be improved. In the area of risk management, the data can provide information on trends on provision of care. The data could also help in justifying capital equipment requirements, physical renovation, and possible increased staffing. The survey data could be shared with the other services which impact on patient satisfaction, such as nutrition care and housekeeping (Weisman and Koch 1989).

The survey may also be used as a marketing tool in efforts by WRAMC to show where it is taking care of patients and producing satisfied customers. WRAMC will start registering active duty patients for care on 1 October 1994. Subsequent to that process, it will register family members for care. Part of the marketing campaign to sell the program to commanders, soldiers, retirees, and family members will include public forums, mail-outs of brochures explaining why WRAMC is a good choice for medical care, and talks to military-affiliated organizations and military units. These are opportunities to show results of patient satisfaction surveys focusing on what patients like about WRAMC and to demonstrate to potential

customers that WRAMC cares about patient concerns and makes improvements based upon those concerns. Since WRAMC is already competing for patients in the National Capital Region (NCR), it has to market itself as best it can. Navy LT Cliff Britton, chief of the Marketing Department for TRICARE in the NCR, would like to use my survey as a marketing tool throughout the region.

LTC Cynthia Gurney, Assistant Chief of the WRAMC Nursing Research Service, plans to use this survey instrument as a model for other patient satisfaction surveys to be used at WRAMC. There are a lot of satisfaction surveys in use at WRAMC, many of them hastily thrown together to meet a requirement or to address patient complaints. Unfortunately, many are not well constructed and do little to address patient satisfaction issues. LTC Gurney could use this survey instrument as a basis for developing patient satisfaction surveys in other services.

A specific recommendation engendered by the outcomes of my particular study is for nursing staff to place greater emphasis on the teaching provided to patients. The areas which showed significant differences in satisfaction by group were all related to teaching either in the amount or quality provided to patients. With the trend towards earlier discharges (three days for c-sections and one to two days for vaginal deliveries), teaching is even more important. New moms are going home to a situation they may not feel prepared to handle.

Unfortunately, the nurses often do not have the time to explain everything. WRAMC, like many hospitals, tends to provide

most of its teaching on the morning of the day of discharge. The postpartum nurses are trying to provide information on self-care within an hour or so of the nursery staff providing information on infant care. At the same time, mothers are busy filling out required paperwork for pediatric examinations, birth certificates, and social security cards and trying to prepare to leave the hospital. Bull and Lawrence concluded in their pilot study that because the morning of discharge is so hectic for the patients, some other time should be set aside for teaching, including a follow up after discharge (1984). The nursing staff of the postpartum wards and newborn nursery could address the issue to determine if there is a better way for them to provide information to the patients.

If individual teaching cannot be provided, perhaps pamphlets or videos could be presented to the patients for them to review during their stay. Red Cross volunteers could assist in providing basic information on what to expect at home. In addition, maybe a class could be set up two weeks after discharge to coincide with the first newborn checkup. This class could be conducted by nursing staff from the obstetrics and pediatrics clinics or by community health nurses. This class could focus on the concerns of the new parents and would be a follow up to their hospital experience. A future study could evaluate new parents at this time to ascertain how well they actually learned what the nursing staff taught them in the hospital.

I would also recommend that patients be encouraged to attend

a birthing class during pregnancy since this appears to better prepare patients for their labor and delivery and postpartum experiences and increases their satisfaction level. In a future research effort, nursing staff could look at why some patients do not attend birthing classes, and based on those reasons, try to make classes more attractive or accessible to those patients.

I would recommend adding a question to the survey instrument about how long a patient was on the ward before delivery. Some patients were hospitalized for several weeks prior to delivery, and this might have influenced their satisfaction level with their experience. I would also change the question on education level to ask if they were college graduates. This would change significantly the number of women who said they had attended college. I did not include questions on ethnicity or marital status, since these questions may be considered controversial by some people. However questions concerning ethnicity or marital status might yield some interesting results.

This survey instrument might be effective for use by obstetrics services at other military hospitals. However, the results of this study are applicable only to WRAMC. The fact that WRAMC is a tertiary care center and a teaching hospital could have influenced the services provided to the patients.

This study was only an exploratory analysis of the satisfaction level of obstetrics patients at WRAMC. Further study and analysis could result in more definitive statistical relationships among the variables tested, especially if a larger

sample is used.

As previously noted, the survey indicates that, overall, patients are satisfied with the obstetrical services they receive at WRAMC. However, there is room for improvement, and this study addresses some of the areas of concern where changes could be made in processes or behaviors. The study also indicated where patients are very pleased with the services they receive, and continued emphasis should be placed on those areas to ensure patients continue to be satisfied. In this era of health care reform, both in the civilian sector and in the military, we must be proactive in taking care of patients. Providing patient-focused quality care includes viewing the patient care experience through the eyes of the patient and improving processes from the patient's perspective. Patient satisfaction surveys can yield valuable information on what is happening in a hospital and are an important tool in improving health care processes.

DRAFT
PATIENT SATISFACTION SURVEY
OBSTETRICS CARE

BACKGROUND (circle your answer to questions 1. through 8.)

1. Did you have a c-section or vaginal delivery?
2. How many other children have you had? 0 1 2 3 4 or more
3. Are you active duty or a family member?
4. Did you attend a birthing class? Yes   No
5. Were you a complicated OB patient? Yes   No
6. What is your education level? Less than High School, High School, College
7. My baby was in the newborn nursery, intermediate nursery, or the NICU.
8. How will you feed your baby? breastfeed bottlefeed
9. What day of the week did you deliver? _____
10. What is your age?_____

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    Strongly                                    Strongly
    Satisfied Satisfied  Neutral  Dissatisfied  Dissatisfied
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A) **TEACHING**

1. Your birthing class prepared you for your labor and delivery and postpartum experience (if applicable).

2. The video tapes were helpful in teaching you how to take care of your baby.

How satisfied are you with how well the nursing staff taught you to:
3. Safely take care of your baby at home.

4. Take care of yourself at home, to include informing you of potential complications.

5. Feed your baby.

6. Recognize the normal physical and emotional changes that take place after birth.

7. Recognize illness in yourself and what actions to take.

8. Recognize illness in your baby and what actions to take.

B) **COMMUNICATION How satisfied are you with how well the nursing staff communicated with you in the following areas:**

1. Orienting you to the ward (explaining the use of the pantry, the ward policies, and providing ward telephone numbers and visiting hours.)

2. Providing information on the progress of your labor.

3. Providing information about your care.

4. Providing information about your baby's care.

5. Allowing you to ask questions about your baby.

6. Answering questions.

7. Explaining the medical terms of your condition so that you could understand them.

8. Explaining your baby's medical condition so that you could understand it.

9. Introducing themselves to you.

10. Explaining their purpose.

11. Identifying themselves by shift so you would know who was responsible for your care at all times.

C) **PHYSICAL CARE How satisfied were you with the physical care you received:**

1. In the obstetrics clinic.

2. During labor and delivery.

3. On the obstetrics ward.

How satisfied were you with:

4. The response time for pain medication requests.

5. The response time for supply requests (pads, clean gowns).

6. Your involvement in the decision-making process concerning your care.

7. Your involvement in the planning of your labor and delivery.

8. The nursing staff's efforts in maintaining your privacy.

9. Your length of stay in the hospital. If not satisfied, was your stay too short or too long? (Circle one.)

10. The quality of nursing care of the day shift.

11. The quality of nursing care of the evening shift.

12. The quality of nursing care of the night shift.

D) **PATIENT/STAFF INTERACTION Please respond to how you felt about your interaction with:**

1. The OB/GYN clinic staff.

2. The labor and delivery staff.

3. The staff in the obstetrics ward.

4. The staff in the newborn nursery.

Please respond to how satisfied you were with the following interactions with the nursing staff:

5. Their friendliness, helpfulness, and supportiveness.

6. Their responsiveness to you.

7. Support with your chosen method of feeding your baby (breast or bottle).

8. Their concern and caring.

9. The amount of listening provided to you.

10. The level of emotional support provided to you.

11. Their interaction with you as a person and patient.

12. Their focus on you as the patient, rather than on the equipment and procedures.

13. Medical and nursing personnel including you in their discussions of your care.

14. The efforts of the nurses to control the noise of the staff, patients, and visitors.

15. The manner in which the nurses acted towards you when they were busy.

16. The way the nurses made you feel when you had questions or needed help.

E) **MOTHER/BABY/FATHER INTERACTION How satisfied were you with the opportunity provided:**

1. To spend time with your baby immediately after delivery.

2. To have your baby room in with you.

3. By the nursing staff to give you time without your baby so that you could rest.

4. For siblings to visit you and the baby (if applicable).

5. With the length of the visiting hours for your baby's father (if applicable).

6. With the length of the visiting hours for other family members and friends.

7. By the nursing staff in encouraging and assisting your baby's father in taking care of your baby (if applicable).

8. To see your baby when you wanted.

F) **ANCILLARY SERVICES How satisfied were you with:**

1. Receiving the food you selected.

2. Receiving enough food to eat.

3. The layout of the room.

4. Your bed's cleanliness and the changing of the bed linen.

5. The availability of pillows and clean linen.

6. The availability of a hospital gown and robe.

7. The cleaning of your room.

OVERALL SATISFACTION

1. How satisfied were you with your delivery and postpartum experience?

2. If you had the choice, how likely would you be to deliver at WRAMC again?

3. How satisfied were you in having your patient care needs met?

4. How satisfied were you in having your baby's care needs met?

5. How prepared do you feel to be discharged?

6. How many of your expectations were met?

OPEN-ENDED QUESTIONS

1. How may we improve our services?

2. What expectations did you have that were not met?

3. If you do not feel prepared for discharge, why not?

4. Please feel free to discuss any encounters which made your stay more or less positive.

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC   20307-5001
APPENDIX B

HSHL-CS (340)

Dear *New Mom*:

We would appreciate your support in improving patient services here at Walter Reed Army Medical Center. We have designed this survey to learn how you felt about your stay here.

Your participation is voluntary. Failure to respond to any question will not affect your status or hospital stay, but by filling out the questionnaire, you can help us identify where we can improve patient services. Do not write your name on the survey as all answers will remain confidential.

Thank you for your assistance.

Sincerely,

Mary E. Garr

MARY E. GARR
Captain, U.S. Army
Administrative Resident

PATIENT SATISFACTION SURVEY
OBSTETRICS CARE

BACKGROUND (Circle your answers to questions 1 through 8.)

1. Did you have a:	C-section	Vaginal Delivery			
2. How many other children have you had?	0	1	2	3	4 or more
3. Are you:	Active Duty	Family Member			
4. Did you attend a birthing class?	Yes	No			
5. Were you a complicated OB patient?	Yes	No			
6. What is your education level?	Less than High School	High School	College		
7. My baby was in the: (Circle all that apply)	newborn nursery	intermediate nursery	NICU		
8. How will you feed your baby?	breastfeed	bottlefeed	both		

9. What day of the week did you deliver? _____

10. What is your age? ____

A) TEACHING

	Strongly Agree	Agree	Neither agree nor Disagree	Disagree	Strongly Disagree	Not Aware Of
1. Your birthing class prepared you for your labor and delivery and postpartum experience (if applicable).	(1)	(2)	(3)	(4)	(5)	(N)
2. The video tapes were helpful in teaching you how to take care of your baby.	(1)	(2)	(3)	(4)	(5)	(N)

How satisfied are you with how well the nursing staff taught you to:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
3. Safely take care of your baby at home.	(1)	(2)	(3)	(4)	(5)
4. Take care of yourself at home, to include informing you of potential complications.	(1)	(2)	(3)	(4)	(5)
5. Feed your baby.	(1)	(2)	(3)	(4)	(5)
6. Recognize the normal physical and emotional changes that take place after birth.	(1)	(2)	(3)	(4)	(5)
7. Recognize illness in yourself and what actions to take.	(1)	(2)	(3)	(4)	(5)
8. Recognize illness in your baby and what actions to take.	(1)	(2)	(3)	(4)	(5)

B) COMMUNICATION How satisfied are you with how well the nursing staff communicated with you in the following areas:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. Orienting you to the ward (explaining the use of the pantry, the ward policies, and providing ward telephone numbers and visiting hours.)	(1)	(2)	(3)	(4)	(5)
2. Providing information on the progress of your labor.	(1)	(2)	(3)	(4)	(5)
3. Providing information about your care.	(1)	(2)	(3)	(4)	(5)
4. Providing information about your baby's care.	(1)	(2)	(3)	(4)	(5)
5. Allowing you to ask questions about your baby.	(1)	(2)	(3)	(4)	(5)
6. Answering questions.	(1)	(2)	(3)	(4)	(5)
7. Explaining the medical terms of your condition so that you could understand them.	(1)	(2)	(3)	(4)	(5)
8. Explaining your baby's medical condition so that you could understand it.	(1)	(2)	(3)	(4)	(5)
9. Introducing themselves to you.	(1)	(2)	(3)	(4)	(5)
10. Explaining their purpose.	(1)	(2)	(3)	(4)	(5)
11. Identifying themselves by shift so you would know who was responsible for your care at all times.	(1)	(2)	(3)	(4)	(5)

C) PHYSICAL CARE How satisfied were you with the physical care you received:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. In the obstetrics clinic.	(1)	(2)	(3)	(4)	(5)
2. During labor and delivery.	(1)	(2)	(3)	(4)	(5)
3. On the obstetrics ward.	(1)	(2)	(3)	(4)	(5)

PHYSICAL CARE: How satisfied were you with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
4. The response time for pain medication requests.	(1)	(2)	(3)	(4)	(5)
5. The response time for supply requests (pads, clean gowns).	(1)	(2)	(3)	(4)	(5)
6. Your involvement in the decision-making process concerning your care.	(1)	(2)	(3)	(4)	(5)
7. Your involvement in the planning of your labor and delivery.	(1)	(2)	(3)	(4)	(5)
8. The nursing staff's efforts in maintaining your privacy.	(1)	(2)	(3)	(4)	(5)
9. Your length of stay in the hospital. If not satisfied, was your stay too short or too long? (Circle one.)	(1)	(2)	(3)	(4)	(5)
10. The quality of nursing care of the day shift.	(1)	(2)	(3)	(4)	(5)
11. The quality of nursing care of the evening shift.	(1)	(2)	(3)	(4)	(5)
12. The quality of nursing care of the night shift.	(1)	(2)	(3)	(4)	(5)

D) PATIENT/STAFF INTERACTION Please respond to how you felt about your interaction with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. The OB/GYN clinic staff.	(1)	(2)	(3)	(4)	(5)
2. The labor and delivery staff.	(1)	(2)	(3)	(4)	(5)
3. The staff in the obstetrics ward.	(1)	(2)	(3)	(4)	(5)
4. The staff in the newborn nursery.	(1)	(2)	(3)	(4)	(5)

PATIENT STAFF INTERACTION: Please respond to how satisfied you were with the following interactions with the nursing staff:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
5. Their friendliness, helpfulness, and supportiveness.	(1)	(2)	(3)	(4)	(5)
6. Their responsiveness to you.	(1)	(2)	(3)	(4)	(5)
7. Support with your chosen method of feeding your baby (breast or bottle).	(1)	(2)	(3)	(4)	(5)
8. Their concern and caring.	(1)	(2)	(3)	(4)	(5)
9. The amount of listening provided to you.	(1)	(2)	(3)	(4)	(5)
10. The level of emotional support provided to you.	(1)	(2)	(3)	(4)	(5)
11. Their interaction with you as a person and patient.	(1)	(2)	(3)	(4)	(5)
12. Their focus on you as the patient, rather than on the equipment and procedures.	(1)	(2)	(3)	(4)	(5)
13. Medical and nursing personnel including you in their discussions of your care.	(1)	(2)	(3)	(4)	(5)
14. The efforts of the nurses to control the noise of the staff, patients, and visitors.	(1)	(2)	(3)	(4)	(5)
15. The manner in which the nurses acted towards you when they were busy.	(1)	(2)	(3)	(4)	(5)
16. The way the nurses made you feel when you had questions or needed help.	(1)	(2)	(3)	(4)	(5)

E) MOTHER/BABY/FATHER INTERACTION How satisfied were you with the opportunity provided:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. To spend time with your baby immediately after delivery.	(1)	(2)	(3)	(4)	(5)
2. To have your baby room in with you.	(1)	(2)	(3)	(4)	(5)
3. By the nursing staff to give you time without your baby so that you could rest.	(1)	(2)	(3)	(4)	(5)
4. For your other children to visit you and the baby (if applicable).	(1)	(2)	(3)	(4)	(5)
5. With the length of the visiting hours for your baby's father (if applicable).	(1)	(2)	(3)	(4)	(5)
6. With the length of the visiting hours for other family members and friends.	(1)	(2)	(3)	(4)	(5)
7. By the nursing staff in encouraging and assisting your baby's father in taking care of your baby (if applicable).	(1)	(2)	(3)	(4)	(5)
8. To see your baby when you wanted.	(1)	(2)	(3)	(4)	(5)

F) ANCILLARY SERVICES How satisfied were you with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. Receiving the food you selected.	(1)	(2)	(3)	(4)	(5)
2. Receiving enough food to eat.	(1)	(2)	(3)	(4)	(5)
3. The layout of the room.	(1)	(2)	(3)	(4)	(5)
4. Your bed's cleanliness and the changing of the bed linen.	(1)	(2)	(3)	(4)	(5)
5. The availability of pillows and clean linen.	(1)	(2)	(3)	(4)	(5)
6. The availability of a hospital gown and robe.	(1)	(2)	(3)	(4)	(5)
7. The cleaning of your room.	(1)	(2)	(3)	(4)	(5)

OVERALL SATISFACTION

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. How satisfied were you with your delivery and postpartum experience?	(1)	(2)	(3)	(4)	(5)
2. How satisfied were you in having your patient care needs met?	(1)	(2)	(3)	(4)	(5)
3. How satisfied were you in having your baby's care needs met?	(1)	(2)	(3)	(4)	(5)
4. How prepared do you feel to be discharged?	Very Prepared	Prepared	Somewhat Prepared	Unprepared	Very Unprepared
5. How many of your expectations were met?	All	Most	Some	Few	None
6. If you had the choice, how likely would you be to deliver at WRAMC again?	Very Likely	Likely	Unsure	Unlikely	Very Unlikely

OPEN-ENDED QUESTIONS
(You may continue your responses on the back.)
1. How may we improve our services?

2. What expectations did you have that were not met?

3. If you do not feel prepared for discharge, why not?

4. Please feel free to discuss any encounters which made your stay more or less positive.

REPLY TO
ATTENTION OF:

HSHL-CS (340)

Dear *New Mom:*

   We would appreciate your support in improving patient services here at Walter Reed Army Medical Center. We have designed this survey to learn how you felt about your stay here.

   Your participation is voluntary. Failure to respond to any question will not affect your status or hospital stay, but by filling out the questionnaire, you can help us identify where we can improve patient services. Do not write your name on the survey as all answers will remain confidential.

   Thank you for your assistance.

                              Sincerely,

                              Mary E. Garr

                              MARY E. GARR
                              Captain, U.S. Army
                              Administrative Resident

PATIENT SATISFACTION SURVEY
OBSTETRICS CARE

BACKGROUND (Circle your answers to questions 1 through 9.)

1. Did you have a: C-section   Vaginal Delivery

2. How many other children have
you had?   0   1   2   3   4 or more

3. Are you: Active Duty   Family Member

4. Have you ever attended a   Yes   No
birthing class given anywhere?

5. Were you a complicated OB   Yes   No
patient?

6. What is your education level?   Less than High   High School   College
        School

7. My baby was in the: (Circle all that apply)   newborn   intermediate   NICU
        nursery   nursery

8. How will you feed your baby?   breastfeed   bottlefeed   both

9. Where did you receive the majority of your prenatal care? (Circle only one)
    a. Walter Reed   b. Ft. Belvoir   c. Ft. Meade   d. Bethesda   e. Malcolm Grow
    f. PRIMUS   g. Other (specify) _____

10. What day of the week did you deliver? _____

11. What is your age? _____

A) TEACHING

	Strongly Agree	Agree	Neither agree nor Disagree	Disagree	Strongly Disagree	Not Aware Of
1. Your birthing class prepared you for your labor and delivery and postpartum experience (if applicable).	(1)	(2)	(3)	(4)	(5)	(N)
2. The video tapes were helpful in teaching you how to take care of your baby.	(1)	(2)	(3)	(4)	(5)	(N)

How satisfied are you with how well the nursing staff taught you:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
3. To take care of yourself at home, to include informing you of potential complications.	(1)	(2)	(3)	(4)	(5)
4. To recognize the physical and emotional changes that take place after birth.	(1)	(2)	(3)	(4)	(5)
5. Recognize illness in yourself and what actions to take.	(1)	(2)	(3)	(4)	(5)

IF YOUR BABY IS BEING DISCHARGED WITH YOU, ANSWER 6 - 8. OTHERWISE GO TO SECTION B.

How satisfied are you with how well the nursing staff taught you:

6. To safely take care of your baby at home.
(1) (2) (3) (4) (5)

7. To feed your baby.
(1) (2) (3) (4) (5)

8. To recognize illness in your baby and what actions to take.
(1) (2) (3) (4) (5)

B) COMMUNICATION How satisfied are you with how well the nursing staff communicated with you in the following areas:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. Orienting you to the ward (explaining the use of the pantry, the ward policies, and providing ward telephone numbers and visiting hours.)	(1)	(2)	(3)	(4)	(5)
2. Providing information on the progress of your labor.	(1)	(2)	(3)	(4)	(5)
3. Providing information about your care.	(1)	(2)	(3)	(4)	(5)
4. Providing information about your baby's care.	(1)	(2)	(3)	(4)	(5)
5. Allowing you to ask questions about your baby.	(1)	(2)	(3)	(4)	(5)
6. Answering questions.	(1)	(2)	(3)	(4)	(5)
7. Explaining the medical terms of your condition so that you could understand them.	(1)	(2)	(3)	(4)	(5)
8. Explaining your baby's medical condition so that you could understand it.	(1)	(2)	(3)	(4)	(5)
9. Introducing themselves to you.	(1)	(2)	(3)	(4)	(5)
10. Explaining their purpose.	(1)	(2)	(3)	(4)	(5)
11. Identifying themselves by shift so you would know who was responsible for your care at all times.	(1)	(2)	(3)	(4)	(5)

C) PHYSICAL CARE How satisfied were you with the physical care you received:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. In the obstetrics clinic where you received the majority of your care.	(1)	(2)	(3)	(4)	(5)
2. During labor and delivery.	(1)	(2)	(3)	(4)	(5)
3. On the obstetrics ward.	(1)	(2)	(3)	(4)	(5)

How satisfied were you with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
4. The response time for pain medication requests.	(1)	(2)	(3)	(4)	(5)
5. The response time for supply requests (pads, clean gowns).	(1)	(2)	(3)	(4)	(5)
6. Your involvement in the decision-making process concerning your care.	(1)	(2)	(3)	(4)	(5)
7. Your involvement in the planning of your labor and delivery.	(1)	(2)	(3)	(4)	(5)
8. The nursing staff's efforts in maintaining your privacy.	(1)	(2)	(3)	(4)	(5)
9. The quality of nursing care of the day shift.	(1)	(2)	(3)	(4)	(5)
10. The quality of nursing care of the evening shift.	(1)	(2)	(3)	(4)	(5)
11. The quality of nursing care of the night shift.	(1)	(2)	(3)	(4)	(5)

D) Please respond to how you felt about your interaction with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. The OB/GYN clinic staff who provided the majority of your care.	(1)	(2)	(3)	(4)	(5)
2. The labor and delivery staff.	(1)	(2)	(3)	(4)	(5)
3. The staff in the obstetrics ward.	(1)	(2)	(3)	(4)	(5)
4. The staff in the newborn nursery.	(1)	(2)	(3)	(4)	(5)

Please respond to how satisfied you were with the following interactions with the nursing staff:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
5. Their friendliness, helpfulness, and supportiveness.	(1)	(2)	(3)	(4)	(5)
6. Their responsiveness to you.	(1)	(2)	(3)	(4)	(5)
7. Support with your chosen method of feeding your baby (breast or bottle).	(1)	(2)	(3)	(4)	(5)
8. Their concern and caring.	(1)	(2)	(3)	(4)	(5)
9. The amount of listening provided to you.	(1)	(2)	(3)	(4)	(5)
10. The level of emotional support provided to you.	(1)	(2)	(3)	(4)	(5)
11. Their interaction with you as a person and patient.	(1)	(2)	(3)	(4)	(5)
12. Their focus on you as the patient, rather than on the equipment and procedures.	(1)	(2)	(3)	(4)	(5)
13. Medical and nursing personnel including you in their discussions of your care.	(1)	(2)	(3)	(4)	(5)
14. The efforts of the nurses to control the noise of the staff, patients, and visitors.	(1)	(2)	(3)	(4)	(5)
15. The manner in which the nurses acted towards you when they were busy.	(1)	(2)	(3)	(4)	(5)
16. The way the nurses made you feel when you had questions or needed help.	(1)	(2)	(3)	(4)	(5)

E) How satisfied were you with the opportunity provided:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. To spend time with your baby immediately after delivery.	(1)	(2)	(3)	(4)	(5)
2. To have your baby room in with you.	(1)	(2)	(3)	(4)	(5)
3. To see your baby when you wanted.	(1)	(2)	(3)	(4)	(5)
4. By the nursing staff in encouraging and assisting you in taking care of your baby.	(1)	(2)	(3)	(4)	(5)
5. For your other children to visit you and the baby (if applicable).	(1)	(2)	(3)	(4)	(5)
6. With the length of the visiting hours for your baby's father (if applicable).	(1)	(2)	(3)	(4)	(5)
7. With the length of the visiting hours for other family members and friends.	(1)	(2)	(3)	(4)	(5)
8. By the nursing staff in encouraging and assisting your baby's father in taking care of your baby (if applicable).	(1)	(2)	(3)	(4)	(5)

F) ANCILLARY SERVICES How satisfied were you with:

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. Receiving the food you selected.	(1)	(2)	(3)	(4)	(5)
2. Receiving enough food to eat.	(1)	(2)	(3)	(4)	(5)
3. The layout of the room.	(1)	(2)	(3)	(4)	(5)
4. Your bed's cleanliness and the changing of the bed linen.	(1)	(2)	(3)	(4)	(5)
5. The availability of pillows and clean linen.	(1)	(2)	(3)	(4)	(5)
6. The availability of a hospital gown and robe.	(1)	(2)	(3)	(4)	(5)
7. The temperature of your room.	(1)	(2)	(3)	(4)	(5)
8. The cleaning of your room.	(1)	(2)	(3)	(4)	(5)

OVERALL SATISFACTION

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
1. How satisfied were you with your delivery and postpartum experience?	(1)	(2)	(3)	(4)	(5)
2. How satisfied were you in having your patient care needs met?	(1)	(2)	(3)	(4)	(5)
3. How satisfied were you in having your baby's care needs met?	(1)	(2)	(3)	(4)	(5)
4. On discharge, how prepared do you feel to take care of yourself?	Very Prepared	Prepared	Somewhat Prepared	Unprepared	Very Unprepared
5. When your baby is discharged, how prepared do you feel to take care of your baby?	Very Prepared	Prepared	Somewhat Prepared	Unprepared	Very Unprepared
6. How many of your expectations were met?	All	Most	Some	Few	None
7. If you had the choice, how likely would you be to deliver at WRAMC again?	Very Likely	Likely	Unsure	Unlikely	Very Unlikely

OPEN-ENDED QUESTIONS (You may continue your responses on the back.)

1. How may we improve our services?

2. What expectations did you have that were not met?

3. If you do not feel prepared for discharge, why not?

4. Please feel free to discuss any encounters which made your stay more or less positive.

5. On the back of this form, please feel free to write any additional comments you may have which might help us improve our care to our new mothers.

REPLY TO
ATTENTION OF:

HSHL-CI (40-38a)   9 April 1994

MEMORANDUM FOR Mary Garr, CPT, MC, Office Of The Chief Of Staff,
               Walter Reed Army Medical Center, Washington, DC
               20307-5001

SUBJECT: Approval to Begin Protocol WU# 9700: Patient Satisfaction
With Obstetrics care At Walter Reed Army Medical Center: A Pilot
Study

1. Your protocol was approved by the Clinical Investigation
Committee (CIC) on 22 March 1994 as an expedited minimal risk study
and has been assigned Work Unit # 9700.

2. You should contact Mr. Burton (Administrative Officer, DCI,
X2102) to make arrangements for funding (if requested).

3. As the principal investigator, you are required by WRAMC 70-1 and
other Federal regulations to submit the following in a timely fashion
to the Department of Clinical Investigation:

    a.   addenda delineating any changes in the protocol
    b.   notification of significant or unexpected side effects
    c.   annual progress reports

Encl   GEORGE C. TSOKOS
as   MAJ, MC
                            Chief, Research Review Service
                            Asst Chief, Dept of Clinical Investigation

Reference List

Abramowitz, Susan, Anne A. Cote, and Elisabeth Berry. 1987. Analyzing patient satisfaction: a multianalytic approach. QRB. 13 (April): 122-130.

Alexander, Lory, Janet Sandridge, and Lucill Moore. 1993. Patient satisfaction: An outcome measure for maternity patients. Journal of Perinatal Neonatal Nursing. 7 (2): 28-39.

Asher, Herbert B. 1983. Causal Modeling, 2nd Ed. Book 3, Sage University Paper Series on Quantitative Applications in the Social Sciences, Series No. 07-003. Beverly Hills and London: Sage Publications.

Bond, Senga and Lois A. Thomas. 1992. Measuring patients' satisfaction with nursing. Journal of Advanced Nursing. 17 (1): 52-63.

Boyle, Kathleen, Gail Moddeman, and Barbara Mann. 1989. The importance of selected nursing activities to patients and their nurses. Applied Nursing Research. 2 (November): 173-177.

Bramadat, Ina J. and Mary Driedger. 1993. Satisfaction with childbirth: theories and methods of measurement. Birth. 20 (March): 22-29.

Bull, Margaret and Donna Lawrence. 1984. A pilot study: postpartum mothers' perception of the information received in the hospital and its usefulness during the first weeks at home. Journal of Community Health Nursing. 1 (2): 111-124.

Churchill, Gilbert A., Jr. 1983. Marketing Research: Methodological Foundations. 3d ed. Chicago: The Dryden Press.

Cleary, Paul D. and Barbara J. McNeil. 1988. Patient satisfaction as an indicator of quality care. Inquiry. 25 (1): 25-36.

Cleary, Paul D., Lisa Keroy, Georgia Karapanos, and William McMullen. 1989. Patient Assessments of Hospital Care. QRB. 15 (June): 172-178.

Cleary, Paul D., Susan Edgman-Levitan, Marc Roberts, Thomas W. Moloney, William McMullen, Janice D. Walker, and Thomas L. Delbanco. 1991. Patients evaluate their hospital care: a national survey. Health Affairs. 10 (4): 254-267.

Cleary, Paul D., Susan Edgman-Levitan, William McMullen, and Thomas L. Delbanco. 1992. The relationship between reported

problems and patient summary evaluations of hospital care. <u>QRB.</u> 18 (February): 53-59.

Crocker, L. and J. Algina. 1986. <u>Introduction to Classical & Modern Theory.</u> New York: Holt, Rinehart, & Winston.

Donabedian, Avedis. 1966. Evaluating the quality of medical care. <u>Milbank Memorial Fund Quarterly.</u> 44: 166-203.

Donabedian, Avedis. 1988. The quality of care: How can it be assessed? <u>JAMA.</u> 260: 1743-1748.

Emory, C. W. (1985). <u>Business Research Methods.</u> 3rd Ed. Homewood, IL: Irwin.

Frederick, Bruce J., Judeann Q. Sharp, and Natalie Atkins. 1988. Quality of patient care: Whose decision? <u>Journal of Nursing Quality Assurance.</u> 2 (3): 1-10.

Green, J.M., V.A. Coupland, and J.V. Kitzinger. 1990. Expectations, experiences, and psychological outcomes of childbirth: a prospective study of 825 women. <u>Birth.</u> 17: 15-24.

Guzman, Patricia M., Elena M. Sliepcevich, Ella P. Lacey, Elaine M. Vitello, Marlene R. Matten, Paula L. Woehlke, and W. Russell Wright. 1988. Tapping patient satisfaction: a strategy for quality assessment. <u>Patient Education and Counseling.</u> 12: 225-233.

Harper Peterson, Mary. 1989. Using patient satisfaction data: an ongoing dialogue to solicit feedback. <u>QRB.</u> 15(June):168-171.

Isaac, Stephen and William B. Michael. 1981. <u>Handbook in Research and Evaluation.</u> 2d ed. San Diego: EdITS publishers.

Joint Commission of Accreditation of Healthcare Organizations. 1993. <u>1994 Accreditation Manual for Hospitals.</u> Oakbrook Terrace, IL: JCAHO.

Kelly-Heidenthal, Patricia. 1992. Are your patients satisfied? <u>Nursing Quality Connection.</u> 1 (5): 3.

Kerfoot, Karlene M. and Carol LeClair. 1991. Building a patient-focused unit: the nurse manager's challenge. <u>Nursing Economics.</u> 9 (6): 441-443.

Kerlinger, Fred N. 1986. <u>Foundations of Behavioral Research.</u> 3d ed. New York: Holt, Rinehart, and Winston, Inc.

Lemke, Robert W. 1987. Identifying consumer satisfaction through

patient surveys. Health Progress. (March): 56-58.

Locker, David and David Dunt. 1978. Theoretical and methodological issues in sociological studies of consumer satisfaction with medical care. Science and Medicine. 12: 283-292.

Lomas, Jonathan, Sharon Dore, Murray Enkin, and Alba Mitchell. 1987. The Labor and Delivery Satisfaction Index: the development and evaluation of a soft outcome measure. Birth. 14 (September): 125-131.

Morales-Mann, Erlinda T. 1989. Comparative analysis of the perceptions of patients and nurses about the importance of nursing activities in a postpartum unit. Journal of Advanced Nursing 14: 478-484.

Nunnally, Jum C. 1978. Psychometric Theory. 2d ed. New York: McGraw-Hill Book Co.

Peters, Thomas J. and Robert H. Waterman, Jr. 1982. In Search of Excellence. New York: Warner Books.

Press, Ganey Associates, Inc. 1992. The Satisfaction Report. South Bend, IN: Press, Ganey Associates, Inc.

Reinick, Carol. 1991. Nursing research instruments: pathway to resources. Applied Nursing Research. 4 (1): 34-45.

Romito, Patrizia and Cristina Zalateo. 1992. Social history of a research project: a study on early post-partum discharge. Social Science and Medicine. 34 (3): 227-235.

Satariano, Harry J., Nancy J. Briggs, and Cate O'Neal. 1987. Discharged from neonatal intensive care: how satisfied are parents? Pediatric Nursing. 13 (5): 352-353, 357.

Spitzer, Roxane B. 1988. Meeting consumer expectations. Nursing Administration Quarterly. 12 (3): 31-39.

SPSS for Windows: Base System User's Guide, Release 6.0. SPSS, Inc., Chicago.

SPSS for Windows: Advanced Statistics, Release 6.0. SPSS, Inc, Chicago.

SPSS for Windows: Professional Statistics, Release 6.0. SPSS, Inc., Chicago.

Statistix, Version 4.0. Analytical Software, Tallahassee.

Warwick, Donald P. and Charles A. Lininger. 1975. <u>The Sample
     Survey: Theory and Practice</u>. New York: McGraw-Hill Book Co.

Watters, Nancy E. and Connie M. Kristiansen. 1989. Evaluating
     hospital postnatal nursing care: development of the
     instruments. <u>Research in Nursing & Health.</u> 12 (5): 299-305.

Weisman, Ellen and Nancy Koch. 1989. Progress Notes. <u>QRB.</u> 15
     (June): 166-167.